Triple Voltage Monitor with ‘Power Good’ Signal

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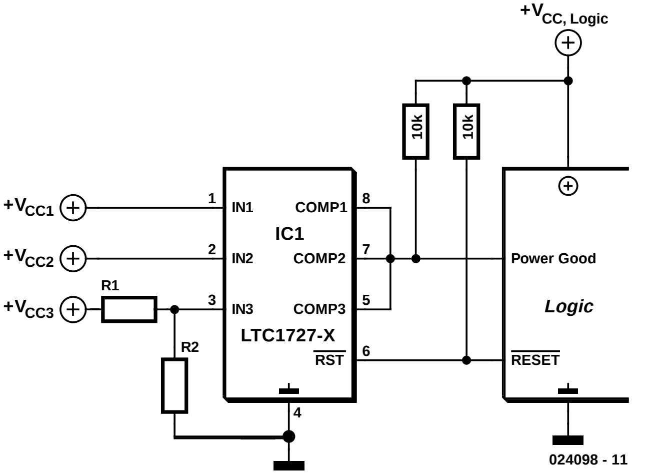
In order to monitor multiple power supply voltages it is possible to use one comparator per voltage, coupled with some logic to combine the output signals and, for example, generate a reset signal for a microprocessor.
Things are simpler with the LTC1727 from Linear Technology (www.linear-tech.com/pdf/17278fa.pdf). This IC is available in different voltage variants. The threshold voltages are as follows:

Type	Vcc1	Vcc2	VccA
LTC 1727-2.5	3.08 V	2.34 V	1.0 V
LTC 1727-5	3.08 V	4.67 V	1.0 V



As long as one of the three voltages is below the threshold value, the open drain $\overline{\text{RST}}$ output remains at ground potential and thereby holds the logic connected to it in a reset state. If all three voltages are above the threshold, $\overline{\text{RST}}$ will remain low for a further 200 ms, in order to ensure that the system is properly reset. A clear reset signal is then generated as long as one of the two fixed supply voltages is at least 1 V.
On the LTC1727 the individual comparator outputs are brought out to separate pins in the form of open drain outputs COMP1, COMP2 and COMPA. They can be connected together and then, with the aid of an external pull-up resistor, create a ‘power good’ signal which goes high to indicate when all the voltages are above their threshold values.

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